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components of the female response to the ram effect: results of a study in Barbarine breed
S. Maatoug-Ouzini1, G. Khalidi1, D. François2 and L. Bodin2
1 INAT, 43, Avenue Charles Nicolle, Cité Mahrajène, 1082, Tunisia, 2 INRA, UR631 Station d’Amélioration Génétique des Animaux, 31320, Castanet-Tolosan, France; lise.bodin@toulouse.inra.fr

The objectives of this study were to (1) assess the reproductive performances of the Barbarine breed for cyclic traits, and (2) estimate the phenotypic and genetic parameters of the female response to the ram effect. A total of 16,150 matings of 4,201 ewes recorded during a period of 10 years in 7 flocks was used in this study. Four traits were analyzed: the response or not to the ram effect and the presence of spontaneous, normal or short sexual cycles after joining rams with ewes in spring. Mean performances of the ewes as well as averages of the four oestrus behaviour traits showed that approximately, 28% of the ewes presented oestrus behaviour during the first 14 days after introducing rams and were considered as already cycling. Among non-cyclic ewes before mating, 86% were responding to the ram effect, among them 47% had a normal cycle, while 53% started with a short cycle followed by a normal one. Flock, year and age at lambing had significant effects on the traits analysed. The spontaneous ovarian activity in spring was negatively correlated with the absence of response to a ram effect ($r_s = -0.44$) and positively correlated with the response by a normal cycle ($r_s = 0.63$). For all variables, heritability values were ranging from 0.03 to 0.09 but significantly different from 0 and repeatability was slightly higher and varied from 0.06 to 0.1. These results can encourage the use of ram-effect technique, which allows increasing sheep productivity, reducing cost inputs in harsh conditions and making sheep breeding strategies more economical. Key-words: ram effect, cyclicity, genetic parameters, Barbarine.

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Post-weaning growth of lambs grazing natural pastures supplemented with protein concentrates
M.J. Marichal1, M.L. Del Pino1, H. Descheniaux2 and L. Piaggio2
1 Facultad de Agronomía, Producción Animal y Pasturas, Garzón 780, 12900 Montevideo, Uruguay.
2 Secretariado Uruguayo de la Lana, Nutrición, Rbla. Baltasar Brum 3764, 11800 Montevideo, Uruguay;
mariadejesus.marichal@fagro.edu.uy

Supplementing sunflower meal (SFM) or soybean meal (SBM) on post-weaning growth rate of lambs grazing natural pastures was investigated. The experiment was conducted at Research Center (S 33°55’ W 55°34’) of the Secretariado Uruguayo de la Lana (January 24 to April 28; 14 and 80 days of adaptation and measurements, respectively). Ninety 3 months old weaned Corriedale lambs were allocated to two blocks (45 lambs/block, 10 lambs/ha) of pastures (510 and 853 kg of initial available DM/ha, 74 and 86 g CP/kg DM and 54 and 58% IVOMD for blocks 1 and 2, respectively). In each block, lambs were randomly assigned to one of the following treatments: continuous grazing (T0), T0+SBM (100 g/lamb/d; 467 and 247 g CP and NDF kg/DM, respectively) (T1), T0+SFM (200 g/lamb/d) (T2); T0+SBM meal (300 g/lamb/d) (T3) or T0+SFM (270 g/lamb/d; 325 and 434 g CP and NDF kg/DM, respectively) providing CP equivalent to SBM in T2 (T4). Lambs initial weight was 20±1.6 kg. Animals were weighed every 15 days. Final body weights (FBW) and average daily gains (ADG) were analyzed in a completely randomized block design with sub sampling. Lambs in T3 and T0 registered the greatest and smallest (P<0.01) FBW (32.9 and 26.0 kg, respectively). The FBW of T4 and T1 were similar (P=0.30) but smaller (P=0.04) than T2 (28.2, 29.1 and 30.8 kg, respectively). Differences (P<0.05) in ADG were first registered on day 52; SBM supplementation resulted in greater (P=0.03) ADG than T0 and T4. Considering the overall experimental period, T0 presented the lowest (P<0.04) and T3 and T2 the greatest (P<0.05) ADG (58, 133 and 112 g/lamb/day, respectively); T4 resulted in greater (P=0.02) ADG (86 g/lamb/day) than T0 but similar (P=0.14) to T1 (104 g/lamb/day). SBM appeared as a more effective supplement than SFM to improve growth in lambs.
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